

Appl. No. : 10/800,818  
Filed : March 15,2004

**Amendments to the Claims:**

Please cancel Claims 50 and 51 without prejudice. Please add Claims 52-68. Claims 1-36 were canceled in a previous amendment.

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-36. (Canceled)

37. (Currently amended) A dental abutment for supporting a dental prosthesis on a dental implant, the abutment comprising:

an upper region comprising a bottom surface;

an interlock region extending below the bottom surface comprising a non-threaded cylindrical portion and plurality of semi-circular protrusions arranged around a periphery of the cylindrical portion, wherein the cylindrical portion has a first radius and the protrusions have a second radius, a ratio of the first radius to the second radius being between approximately 4:1 and approximately 2:1 and wherein the interlock region has a length measured from the bottom surface that is equal to a first distance; and

a non-threaded post extending below the interlock region; the post having a length measured from the bottom surface that is equal to a second distance.

38. (Previously presented) The dental abutment according to Claim 37, wherein the ratio of the first radius to the second radius is approximately 3:1.

39. (Previously presented) The dental implant according to Claim 37, wherein the first distance is greater than 1 millimeter.

40. (Previously presented) The dental abutment according to Claim 37, wherein the abutment further comprises an inner bore.

41. (Previously presented) The dental abutment according to Claim 40, wherein inner bore includes a first region and a second region, the first region being positioned below the second region and having a diameter smaller than the first region.

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42. **(Previously presented)** The dental abutment according to Claim 41, wherein inner bore includes a seat formed between the first and second regions.

43. **(Previously presented)** The dental abutment according to Claim 42, wherein the second region includes capture threads.

44. **(Previously presented)** The dental abutment according to Claim 43, wherein the capture threads are double threaded.

45. **(Previously presented)** The dental abutment according to Claim 37, wherein the second distance is greater than approximately 3 millimeters.

46. **(Previously presented)** The dental abutment according to Claim 45, wherein the first distance is greater than 1 millimeter.

47. **(Previously presented)** The dental abutment according to Claim 37, wherein the three protrusions are arranged around the perimeter of the interlock region such that each of the protrusions are approximately 120 degrees apart from one another.

48. **(Previously presented)** The dental abutment according to Claim 37, wherein the bottom surface of the abutment has a third radius and a ratio of the third radius to the second radius being between approximately 5:1. and 4:1.

49. **(Previously presented)** The dental abutment according to Claim 48, wherein the ratio of the third radius to the second radius is approximately 4.5:1.

50. **(Canceled)**

51. **(Canceled)**

52. **(New)** A prosthodontic component for mating with a dental implant, comprising:  
an upper region comprising a bottom surface;

an interlock region extending below the bottom surface, the interlock region configured to mate with an interlock chamber of a dental implant having a non-threaded cylindrical portion and at least three semi-circular channels arranged around a periphery of the cylindrical portion, wherein the cylindrical portion has a first radius and the channels have a second radius, a ratio of the first radius to the second radius being between approximately 4:1 and approximately 2:1 and wherein the interlock chamber of the dental implant has a length measured from the bottom surface that is equal to a first distance; and

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an inner bore extending through the prosthodontic component.

53. (New) The prosthodontic component to Claim 52, wherein the ratio of the first radius to the second radius is approximately 3:1.

54. (New) The prosthodontic component according to Claim 52, wherein the first distance is greater than 1 millimeter.

55. (New) The prosthodontic component according to Claim 52, wherein the three channels are arranged around the perimeter of the interlock chamber such that each of the channels are approximately 120 degrees apart from one another.

56. (New) A prosthodontic component for mating with a dental implant, the prosthodontic component comprising:

an upper region comprising a bottom surface;

an interlock region extending below the bottom surface comprising a non-threaded cylindrical portion and at least one semi-circular protrusions arranged around a periphery of the cylindrical portion, wherein the cylindrical portion has a first radius and the at least one protrusion has a second radius, a ratio of the first radius to the second radius being between approximately 4:1 and approximately 2:1 and wherein the interlock region has a length measured from the bottom surface that is equal to a first distance;

a non-threaded post extending below the interlock region; the post having a length measured from the bottom surface that is equal to a second distance; and

and an inner bore extending through the dental abutment.

57. (New) The prosthodontic component according to Claim 56, wherein the ratio of the first radius to the second radius is approximately 3:1.

58. (New) The prosthodontic component according to Claim 56, wherein the first distance is greater than 1 millimeter.

59. (New) The prosthodontic component according to Claim 56, wherein the second distance is greater than approximately 3 millimeters.

60. (New) The prosthodontic component according to Claim 59, wherein the first distance is greater than 1 millimeter.

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61. (New) The prosthodontic component according to Claim 56, wherein the bottom surface of the prosthodontic component has a third radius and a ratio of the third radius to the second radius is between approximately 5:1. and 4:1.

62. (New) The prosthodontic component according to Claim 61, wherein the ratio of the third radius to the second radius is approximately 4.5:1.

63. (New) A dental abutment for supporting a dental prosthesis on a dental implant, the abutment comprising:

an upper region comprising a bottom surface;

an interlock region extending below the bottom surface comprising a non-threaded cylindrical portion and at least three semi-circular protrusions arranged around a periphery of the cylindrical portion, wherein the cylindrical portion has a first radius and the protrusions have a second radius, a ratio of the first radius to the second radius being between approximately 4:1 and approximately 2:1 and wherein the interlock region has a length measured from the bottom surface that is equal to a first distance.

wherein the bottom surface of the abutment has a third radius and a ratio of the third radius to the second radius is between approximately 5:1 and 4:1.

64. (New) The dental abutment according to Claim 63, wherein the ratio of the first radius to the second radius is approximately 3:1.

65. (New) The dental abutment according to Claim 63, wherein the abutment further comprises an inner bore.

66. (New) The dental abutment according to Claim 63, wherein the at least three protrusions are arranged around the perimeter of the interlock region such that each of the protrusions are approximately 120 degrees apart from one another.

67. (New) The dental abutment according to Claim 63, wherein the ratio of the third radius to the second radius is approximately 4.5:1.